

REMARKS

Reconsideration and allowance of the subject application are respectfully requested. Claims 1-21 presently are pending in the application. Applicant respectfully submits that the pending claims define patentable subject matter.

As a preliminary matter, Applicant thanks the Examiner for indicating that claims 7 and 16 would be allowable if rewritten in independent form. However, Applicant respectfully requests the Examiner to hold in abeyance the rewriting of these claims until the Examiner has had the opportunity to reconsider the rejected parent claims in light of the arguments presented below in support of the Applicant's traverse of the rejection.

Finality of Current Action & Substance of Interview

In response to the Amendment filed February 26, 2008, the Examiner rejects the agreement reached during the telephonic interview of October 23, 2007, and further states:

[a]ll claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114.

During the telephone interview of May 5, 2008, the Applicant's representative discussed the finality issue with the Examiner. In particular, Applicant's representative respectfully submitted that the amendments made to the claims in the Amendment of February 26, 2008 changed the scope of the invention and the amended claims could not be rejected on the same "grounds" previously articulated by the Examiner in the previous Office Action dated November 26, 2007. Thus, the finality of the Office Action is improper and should be withdrawn.

However, no agreement was reached and the Examiner advised that he would reconsider the finality upon receipt of a response to the outstanding office action.

Claim Rejections - 35 USC § 112

Claims 2, 12 and 20 are rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the enablement requirement. In particular, the Examiner asserts that the claimed feature of “the meta-information is written after the data of the logical block is written” is not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. Applicant respectfully submits that the rejection is improper.

The Examiner states that because the recording is performed in “block” units, with respect to the main region and the spare region existing in the same block, it is not possible to first record data in the main region, and then record meta information in the spare region. However, Applicant notes, referring to FIG. 6 and paragraph [0042] of Conley et al, it is disclosed that "An old/new flag 27 is written in each of the page 3-5 to indicate the data of those pages is old, while the flag 27 for the remaining pages 0-2, 6 and 7 remain set "new"." That is, after recording pages 3-5 of the updated page on a new block 25, the flag of each page is recorded again without changing data of each page. Hence, considering the fact that the block includes a multiple of pages, it is not difficult to record in the unit 27 smaller than the block unit 21. Accordingly, Applicant submits that one of ordinary skill in the art would know how to write data to a flash memory in a unit smaller than a block.

In view of the above, the Examiner is requested to withdraw the enablement rejection of claims 2, 12 and 20.

Claim Rejections - 35 USC § 102

Claims 1, 3, 4, 11, 13, 14, 18, 19 and 21 stand rejected under 35 U.S.C. 102(b) as being anticipated by Conley (US 2002/0099904). Applicant respectfully submits these claims would not have been anticipated by or rendered obvious in view of Conley.

Independent claim 1 recites in part “the flash memory controller is configured to perform a write operation for writing the data and the meta-information allocated to the logical block in a new physical block without changing flash memory state information, wherein the flash memory state information is written in a previous physical block corresponding to the logical block if the previous write operation has been performed for the logical block.” Independent claims 11 and 18 recite features similar to these of claim 1.

On page 6 at item (e), the Examiner cites FIG. 8 and paragraph [0049] of Conley as allegedly disclosing this feature. However, referring to FIG. 8, Conley discloses some data of the logical block is recorded in a new physical block.

On the other hand, according to the claimed invention, memory state information in a previous physical block is not changed, and all updated data of the logical block is recorded in a new physical block (see, for example, FIGS. 6, 7 and 8C of the present application). Specifically, referring to FIG. 8C, in the process of scanning, if the state value for LBN recorded in BAT is “1”, deletion (D) is marked on the memory state information recorded in the auxiliary region of the currently-selected block, so it can be understood that all data of the logic block is stored in the same physical block.

Accordingly, Applicant respectfully submits that claims 1, 11 and 18, as well as dependent claims 3, 4, 13, 14, 19 and 21, should be allowable because the cited references does not teach or suggest all of the features of the claims.

Claim Rejections - 35 USC § 103

Claims 5, 6, 8-10, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conley (cited supra) in view of Kim et al. (US 6,381,176).

Applicant respectfully submits that Kim fails to cure the deficiency of Conley as discussed above, and thus, claims 5, 6, 8-10, 15 and 17 are patentable by virtue of their dependency. Further, Applicant submits that the cited references do not teach or suggest the additional features of these claims.

Claim 5 recites “the flash memory controller is configured to perform a recovery operation which detects, during a scanning process, physical blocks for the logical block number and recovers from an error by determining a valid block for the logical block among the detected physical blocks.” Claim 15 recites similar features.

Conley does not disclose a valid “block”, but instead discloses a valid “page” within different blocks (see FIG. 8 of Conley). Further, Kim only discloses scanning of the block unit. Thus, the Examiner’s proposed combination of Coley and Kim does not teach or suggest disclose all of the features of the claims.

Accordingly, Applicant respectfully submits that claims 5, 6, 8-10, 15 and 17 would not have been rendered obvious in view of Conley and Kim.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/Christopher R. Lipp/

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

Christopher R. Lipp
Registration No. 41,157

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: June 6, 2008